CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.07/KRIDL/CEMENT/2014-15

Date: 07.06.2014

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
AGENCY	:	**Technical Manager**, KRIDL, Bangalore.
NAME OF THE WORK	:	Improvements of Roads (UGD Laying Roads) and Drains in Sandyagappa Reddy Layout, Mariyannapalya in Ward No.07 Byatarayanapura, BBMP, Bangalore.
REFERENCE	:	AEE/(KOD.SUB.DIV)/ /2014-15 Dated: 06.06.2014
SAMPLE ID	:	Cement
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-1989
1	a) Initial Setting Time	IS-4031 (Part -5)	140 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	450 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	25.50 %	-

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Job No.: CTCE/BBMP/W.No.07/KRIDL/SAND/2014-15 : 07.06.2014

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Improvements of Roads (UGD Laying Roads) and Drains in Sandyagappa Reddy Layout, Mariyannapalya in Ward No.07 Byatarayanapura, BBMP, Bangalore.

Reference : AEE/(KOD.SUB.DIV)/ /2014-15 Dated: 06.06.2014

Date of Testing : 07.06.2014

Material : Sand Total Wt. of Aggregates in gms **2000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	102	5.10	5.10	94.9	90-100
2.36	215	10.75	15.85	84.2	75-100
1.18	522	26.10	41.95	58.1	55-90
600 Micron	409	20.45	62.40	37.6	35-59
300 Micron	487	24.35	86.75	13.3	8-30
150 Micron	208	10.40	97.15	2.8	0-10

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Job No.: CTCE/BBMP/W.No.07/KRIDL/AGG/2014-15 : 07.06.2014

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Improvements of Roads (UGD Laying Roads) and Drains in Sandyagappa Reddy Layout, Mariyannapalya in Ward No.07 Byatarayanapura, BBMP, Bangalore.

Reference : AEE/(KOD.SUB.DIV)/ /2014-15 Dated: 06.06.2014

Date of Testing : 07.06.2014

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **25000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	985	3.94	3.94	96.06	95-100
20	15370	61.48	65.42	34.58	30-70
10	5845	23.38	88.80	11.20	10-35
4.75	2340	9.36	98.16	1.84	0-5

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Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.07/KRIDL/STEEL/2014-15 07.06.2014

TEST REPORT ON REINFORCEMENT STEEL

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager**, KRIDL, Bangalore.

Name of the work : Improvements of Roads (UGD Laying Roads) and Drains in Sandyagappa Reddy Layout, Mariyannapalya in Ward No.07 Byatarayanapura, BBMP, Bangalore.

Reference : AEE/(KOD.SUB.DIV)/ /2014-15 Dated: 06.06.2014

Date of Test : 07.06.2014

Technical Reference : IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	10	0.62	513	553	13.25	O.K	O.K

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Job No.: CTCE/BBMP/W.No.07/KRIDL/CUBE/2014-15

18.07.2014

TEST REPORT ON CONCRETE CUBES

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of the work : Improvements of Roads (UGD Laying Roads) and Drains in Sandyagappa Reddy Layout, Mariyannapalya in Ward No.07 Byatarayanapura, BBMP, Bangalore.

Reference : AEE/(KOD.SUB.DIV)/ /2014-15 Dated: 06.06.2014

Sample ID : Drain Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{20}

Compressive Strength as on : 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	20.06.2014	18.07.2014	8.184	492.5	21.89
2	20.06.2014	18.07.2014	8.263	515.3	22.90
3	20.06.2014	18.07.2014	8.397	526.7	23.41

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Job No.: CTCE/BBMP/W.No.07/KRIDL/WMM/Gradation/2014-15 07.07.2014

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Improvements of Roads (UGD Laying Roads) and Drains in Sandyagappa Reddy Layout, Mariyannapalya in Ward No.07 Byatarayanapura, BBMP, Bangalore.

Reference : AEE/(KOD.SUB.DIV)/ /2014-15 Dated: 06.06.2014

Date of Testing : 07.07.2014

Material : WMM

Sample Location : WMM Mix Plant Oven Dry Wt (gm): **25500**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	995	995	3.9	96.1	95-100
22.4	6230	7225	28.3	71.7	60-80
11.2	5360	12585	49.4	50.6	40-60
4.75	4285	16870	66.2	33.8	25-40
2.36	3590	20460	80.2	19.8	15-30
0.600	2370	22830	89.5	10.5	8-22
0.075	2385	25215	98.9	1.1	0-8

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Job No.: CTCE/BBMP/W.No.07/KRIDL/SDBC/Bitumen/2014-15 16.07.2014

BITUMEN CONTENT AND GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

AASHTO T 164 & AASHTO T 30

CLIENT	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
AGENCY	**Technical Manager,** KRIDL, Bangalore.
NAME OF THE WORK	Improvements of Roads (UGD Laying Roads) and Drains in Sandyagappa Reddy Layout, Mariyannapalya in Ward No.07 Byatarayanapura, BBMP, Bangalore.
REFERENCE	AEE/(KOD.SUB.DIV)/ /2014-15 Dated: 03.06.2014
SAMPLE I/D	Roads and Drains in Sandyagappa Reddy Layout, Mariyannapalya in Ward No.07
DATE OF TESTING	16.07.2014

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	475	475.5
3. Weight of Asphalt and Mineral matter Extracted,	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	25	24.50
7. Bitumen content in %	5.00	4.90
8. Average	**4.95**	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Trail 1				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	34.53	7.27	7.27	92.73	90-100
4.75	242.6	51.07	58.34	41.66	35-51
2.36	35.87	7.55	65.89	34.11	24-39
1.18	64.89	13.66	79.56	20.44	15-30
0.3	43.52	9.16	88.72	11.28	9-19
0.075	32.68	6.88	95.60	4.40	3-8

SIEVE SIZE	Trail 2				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	36.23	7.25	7.25	92.75	90-100
4.75	252.2	50.44	57.69	42.31	35-51
2.36	36.58	7.32	65.00	35.00	24-39
1.18	74.96	14.99	79.99	20.01	15-30
0.3	48.63	9.73	89.72	10.28	9-19
0.075	28.65	5.73	95.45	4.55	3-8

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